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PPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO		
10/037,507	01/04/2002	Gary O'Connor	7385-82593			
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Welsh & Katz, Ltd.			EXAMINER			
John P. Christensen 22nd Floor			PAK, SUNG H			
120 South Riverside Plaza Chicago, IL 60606			ART UNIT	PAPER NUMBER		
Cincago, IL 00000			2874			
			DATE MAIL ED: 07/21/2003			

Please find below and/or attached an Office communication concerning this application or proceeding.

Offic Action Summary  Examin r Sung H. Pak  The MAILING DATE of this communication appears on the cover sheet with the correspondence address Period for Reply  A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.  - Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.  - If the period for reply specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).  - Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).	<u>v                                      </u>			<del></del> -			A 15		
Examin r   Sung H. Pak   2874   2874   2874   2874   2874   2874   2874   2874   2874   2876				′	Applicati n N		Applicant(s)	W	
Sung H, Pek   2874					10/037,507		O'CONNOR, GARY		
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THE MAILING DATE OF THIS COMMUNICATION.  Eatherised or the may be variable under the provision of 3 CFR 1.15(e). In no event, however, may a reply be timely field after SIX (6) MONTHS from the mailing date of this communication.  It NO pend for reply is spatially store the mailing date of this communication.  It NO pend for reply is spatial early to the provision of the communication of the communication of the provision of the priority documents have been received in Application No			ING DATE of this commu	nication appo	ears on the cove	er sheet with the c	orrespondence addi	ess	
2a)  This action is FINAL. 2b)  This action is non-final.  3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213.  Disposition of Clalms  4)  Claim(s) 1-16 is/are pending in the application.  4a) Of the above claim(s) is/are withdrawn from consideration.  5)  Claim(s) is/are allowed.  6)  Claim(s) is/are allowed.  6)  Claim(s) is/are allowed.  7)  Claim(s) as 15 and 16 is/are objected to.  8)  Claim(s) are subject to restriction and/or election requirement.  Application Papers  9)  The specification is objected to by the Examiner.  10)  The drawing(s) filed on is/are: a)	THE N - Extense after S - If the p - If NO - Failum - Any re	MAILING D sions of time n SIX (6) MONTH period for reply period for reply e to reply withi eply received b	ATE OF THIS COMMUN nay be available under the provision IS from the mailing date of this com a specified above is less than thirty is specified above, the maximum is in the set or extended period for reply the Office later than three months	IICATION. us of 37 CFR 1.13 umunication. umunication, umu	6(a). In no event, how within the statutory mill apply and will expire cause the application	vever, may a reply be tim inimum of thirty (30) day a SIX (6) MONTHS from to become ABANDONE	nely filed s will be considered timely. the mailing date of this com D (35 U.S.C. § 133).	munication.	
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6)  Claim(s) 1-6 and 9-14 is/are rejected.  7)  Claim(s) 7.8.15 and 16 is/are objected to.  8)  Claim(s) are subject to restriction and/or election requirement.  Application Papers  9)  The specification is objected to by the Examiner.  10)  The drawing(s) filed on is/are: a) accepted or b) objected to by the Examiner.  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  11)  The proposed drawing correction filed on is: a) approved b) disapproved by the Examiner.  If approved, corrected drawings are required in reply to this Office action.  12)  The oath or declaration is objected to by the Examiner.  Priority under 35 U.S.C. §§ 119 and 120  13)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  a)  All b) Some *c) None of:  1.  Certified copies of the priority documents have been received.  2.  Certified copies of the priority documents have been received in Application No  3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.  14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  a)  The translation of the foreign language provisional application has been received.  15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 120 and/or 121.  Attachment(s)  1 Interview Summary (PTO-413) Paper No(s)  5 Notice of Paferences Cited (PTO-892)  5 Notice of Interview Summary (PTO-152)		•	. ,	are withdraw	n from conside	ration.			
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#### **DETAILED ACTION**

#### Information Disclosure Statement

All references submitted in the information disclosure statement have been considered by the examiner.

## Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-6, 9-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson et al (US 2003/0103735 A1).

Anderson et al reference discloses an optical device with all the limitations set forth in the claims, except it does not teach the axis of transmission from an optical source being perpendicular to the axis of plug insertion. Never the less, Anderson et al reference does disclose: optical plug and receptacle (Fig. 2); disposing an optical source and a receiver on a side wall of the receptacle with the axis of transmission from the optical source to the receiver directed into and across a plug space (Fig. 3A); interlocking the connection between the plug and the optical source when the detector received the signal from the optical source (Fig. 4, abstract); the optical source being a light emitting diode, and the receiver being a photodiode.

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However, disposing the optical sources and receivers such that the axis of transmission from the optical source is perpendicular to the plug insertion axis, is well known and commonly used in the optical module art. Such an arrangement allows for better optical alignment between the optical source and the fiber connectors with the use of alignment lens or mirrors. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Anderson et al device to have optical source and receiver disposed such that their axis of transmission is perpendicular to the axis of plug insertion.

### Allowable Subject Matter

Claims 7-8 and 15-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: an optical interlock device for shutting off the optical source when an optical connector plug is absent from the receptacle is known and taught in the prior art. For example, Peterson et al (US 5,113,467) disclose a magnetic sensor for detecting the presence of a fiber optic plug from the receptacle. Barath et al (US 4,589,404) disclose electrical sensor for detecting the presence of fiber optic connector from the light source receptacle.

However, none of the prior art fairly teaches or suggests such an optical interlock device utilizing optical emitter and detector, such that interruption of light signal from the Application/Control Number: 10/037,507

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light source disposed on the side wall of the receptacle to the receiver disposed on the

same side wall of the receptacle activates the optical interlock which disconnects the

transmission of light between the light transmitter and optical plug, as claimed in the

instant application.

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Sung H. Pak whose telephone number is (703) 308-

4880. The examiner can normally be reached on Monday - Thursday: 6:30am-

5:00pm.

The fax phone numbers for the organization where this application or proceeding

is assigned are (703) 308-7724 for regular communications and (703) 308-7724 for

After Final communications.

Ann

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the receptionist whose telephone number is (703) 308-

0956.

sp

July 14, 2003

Sung H. Pak Examiner

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Rodney Bovernick
Supervisory Patent Exemined
Technology Center